MODEL WES50 ELECTRONIC SOLDERING STATION

DESCRIPTION

The WES50 Soldering Station is part of the range of product which have been developed for industrial manufacturing as well as for the repair sector. A microcontroller makes operation simple and easy. The digital electronic control system guarantees good control performance for various soldering jobs.

A grounded soldering iron tip, zero power switching and anti-static design of the station and tool completes the high quality standard. The station features tip temperature calibration and the ability to lock the tip temperature setting; and the station will enter a sleep mode and shut off power to the tool and indicator LED after 99 minutes of inactivity.

Tip temperature is set in the range of 350°F to 850°F (175°C to 455°C) with the front panel knob and the LED power indicator will be green for normal operation or red if the temperature is locked. This soldering station is CUL approved and meets all applicable standards.

OPERATING INSTRUCTIONS

Unpack unit carefully. Place spring and funnel in slot in top of tool stand. Attach tool stand to either side of the power unit, if desired. Fill reservoir with water and wet sponge, distilled water is preferred. Insert tool in holder and connect tool plug to receptacle on power unit; rotate plug housing to lock plug into receptacle. Insert line cord plug into properly grounded AC receptacle and turn station on. Set temperature control knob to desired tip temperature. Wait 30 seconds. Remove tool from holder and tin tip with solder. Unit is now ready for use.

Always use the lowest temperature that will handle the load you are soldering. The Weller® electronic control provides maximum power to the heated load even when set to the lowest temperature; therefore, there is not need to use high temperature to handle heavy soldering loads. By using lower temperatures and properly selecting tip styles, sensitive components will be protected from heat damage.

WARNING: Do not remove ground prong from line cord plug. Removal may cause tip temperature control to be erratic.

AVAILABLE MODELS AND HAND PIECES

PRODUCT	DESCRIPTION
WES50	Power unit, 120V 60Hz, °F dial markings, PES50 tool and tool stand
WES50D	Power unit, 220V 50/60 Hz, °C dial markings, PES50 tool and tool stand
WES50DUK	Power unit, 230V 50/60 Hz, °C dial markings, PES50 tool and tool stand
WES50J	Power unit, 100V 50/60 Hz, °C dial markings, PES50 tool and tool stand
WES50T	Power unit, 110V 60 Hz, °C dial markings, PES50 tool and tool stand
PES50	50 watt Soldering Tool w/ETA Tip

SPECIFICATIONS

1. Power Input: 120VAC ±10%, 60 Hz, (230VAC ±10%, 50/60 Hz), 60 watts
2. Power unit output voltage: isolated 24VAC @ 2.1 amperes.
3. Size: 4.5" x 5.9" x 3.6"
4. Line Cord: 3 wire, UL recognized
5. Tip temperature control range: 350°F to 850°F (175°C to 455°C).
6. Control setting resolution: 10°F (5°C).
7. Stability: ±10°F (±6°C) per MIL-STD-2000.
8. Absolute accuracy: Average tip temperature is calibrateable to ±9°F (±5°C) at idle with no load.
9. Ambient temperature range: 60°F to 110°F (16°C to 44°C).
10. Housing and tool handle made with Electrostatic Protective Materials.
11. WES50 units are UL listed and meets all applicable standards.

ACTIVATION OF LOCKOUT FEATURE

1. Set the temperature set knob to the desired tip temperature.
2. Apply the Lockout Pencil to the ESD symbol on the front panel until the LED starts slowly (5 hz/sec) blinking red; remove the Lockout Pencil within 2.5 seconds and the temperature setting will be locked in. The indicator LED will be red and turning the temperature set knob will have no effect on the tip temperature.
3. Reverse the lockout by applying the Lockout Pencil to the ESD symbol until the LED is slowly blinking red; remove the Lockout Pencil within 2.5 seconds and the temperature set knob will function normally and the indicator LED will be green.

TIP TEMPERATURE CALIBRATION PROCEDURE

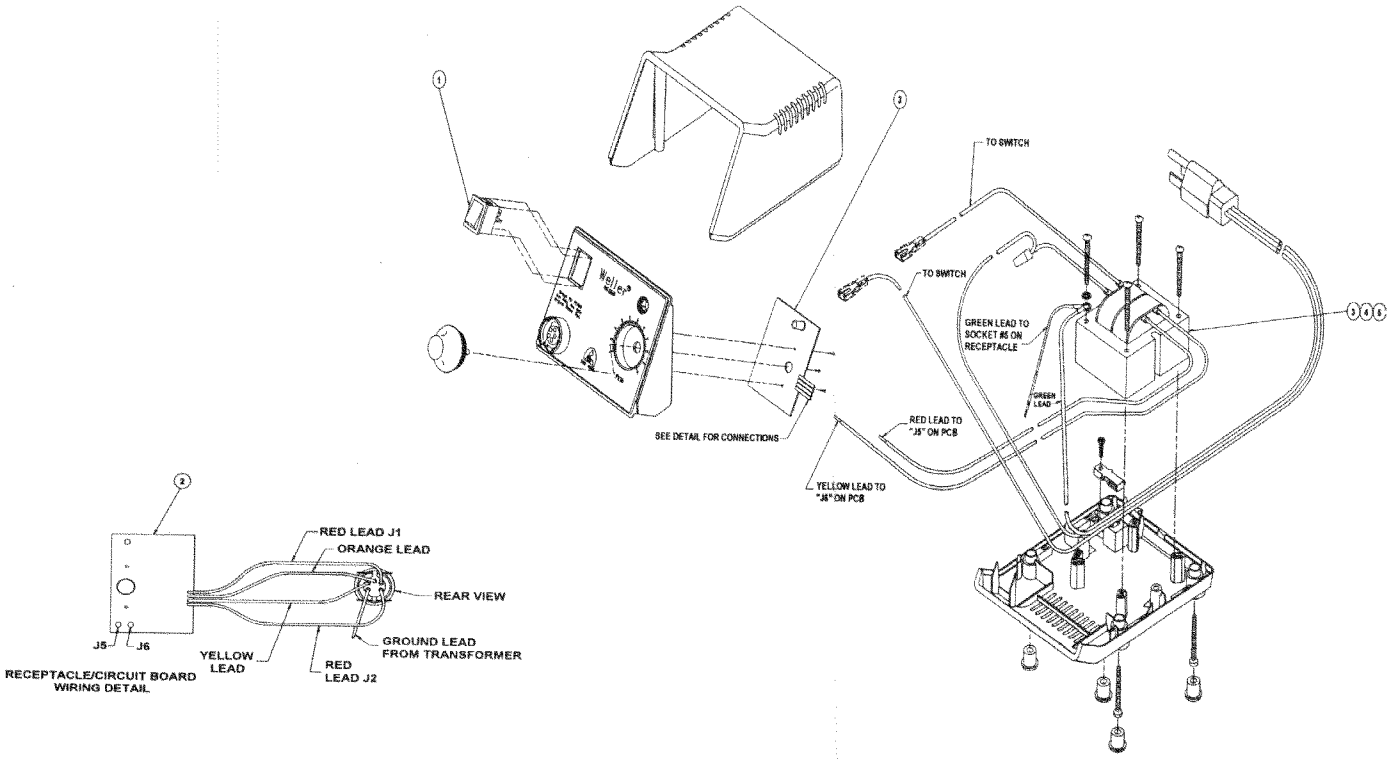
1. Monitor the tip temperature with a 30 gauge thermocouple resistance welded to the center of the wetted area, tinning should be removed before welding. K-111 temperature test kits are recommended; see Replacement Parts and Accessories Section.
2. Set the temperature set knob to the desired tip temperature and allow the tip temperature to stabilize.
3. Apply the Lockout Pencil to the ESD symbol on the front panel. The LED should slowly blink red for 2.5 seconds and then slowly blink green; set the temperature set knob to the observed tip temperature, remove the Lockout Pencil, and the calibration procedure is complete.

RESET STATION TO FACTORY NOMINAL CALIBRATION

With station turned off, set temperature set knob to 600°F (315°C), apply the Lockout Pencil to ESD symbol on front panel and turn station on. Remove the Lockout Pencil and the procedure is complete. Any tip temperature calibration programmed above will reset.

REPLACEMENT PARTS AND ACCESSORIES

KEY NO.	PART NO.	DESCRIPTION
1	SW110	Power Switch
2	WES204	Circuit Board Assembly
3	WES201	Power Transformer, 120VAC, 60 Hz
4	WES202	Power Transformer, 230VAC, 50/60 Hz
5	WES203	Power Transformer, 100VAC, 50/60 Hz
Not Shown	PW50	Lockout Pencil
Not Shown	TC405	Sponge
Not Shown	DS200K	Desoldering Adapter Kit
Not Shown	PH50	Tool Stand w/Spring and Funnel for PES50 Tool
Not Shown	PES50	PES50 Tool
Not Shown	SMTA	Surface Mount Tip Adapter for PES50 Tool
Not Shown	WA2000	Soldering Tool Analyzer
Not Shown	WPB1	Weller® Polishing Bar
Not Shown	K-111	Temperature Test Kit
Not Shown	WES50PU	Power unit only, 120V 60 Hz, °F dial markings, US style 120VAC plug.
Not Shown	WES50DPU	Power unit only, 220V 50/60 Hz, °C dial markings, US style 120VAC plug.
Not Shown	WES50DUKPU	Power unit only, 230V 50/60 Hz, °C dial markings, UK style fused AC plug.
Not Shown	WES50JPU	Power unit only, 100V 50/60 Hz, °C dial markings, US style 120VAC plug.
Not Shown	WES50TPU	Power unit only, 110V 60 Hz, °C dial markings, US style 120VAC plug.



MODEL PES50 50 WATT SOLDERING TOOL

PRODUCT DESCRIPTION

The Weller PES50 tool features stainless steel heater element construction, a non-burning silicone rubber cord and a large selection of iron plated copper tips in various styles, including tips for surface mount devices. The handle design is lightweight, high impact ESD plastic, with controlled thermal conductivity via a foam sleeve to allow continuous use without discomfort from heat or fatigue. The heating element is a fast response, long life, nichrome wound, unit encased in stainless to eliminate corrosion at high temperature.

The Weller PES50 tools are interchangeable without recalibration of the soldering station. This is made possible by the use of a precision temperature sensor; which is positioned deep inside the tip to insure rapid response to soldering load variations.

The Weller PES50 tool has been specifically designed for use at electrostatic free workstations and is completely free from stored static charges. The plastic used in this product meets the requirements for Electrostatic Protective Materials. All Weller ESD tools comply with DOD-HDBK-263.

The Weller PES50 tool is designed to be used with the WES50 series power units. The station and tool combination meets DOD-STD-2000, MIL-S-2000, MIL-S-45743, W-S-570 as well as DOD-STD-1686.

SPECIFICATIONS

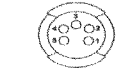
1.	Wattage:	50 watts at 24 Vac.
2.	Tip voltage:	Less than 2 mv RMS to line cord ground pin when used with Weller soldering stations.
3.	Tool weight:	2 ounces without cord.
4.	Tool material:	Static dissipative thermoplastic handle and stainless steel.
5.	Heater type:	Fiberglass and ceramic insulated heating element. Reverse wound for low leakage and magnetic field cancellation.
6.	Tip type:	Weller ET and SMT series tips. Copper with heavy iron, nickel and chromium plated for long life.
7.	Sensor:	Type K thermocouple. Fits deep inside tip for best response.
8.	Handle design:	Heat insulated with foam sleeve for low grip temperature and maximum comfort.
9.	Tool cord:	Silicone rubber, burn resistant.
10.	Connector:	Polarized, 5 pin locking.
11.	Recovery time:	Less than 10 seconds from 100°F drop with ETA tip at 700°F.

REPLACEMENT PARTS

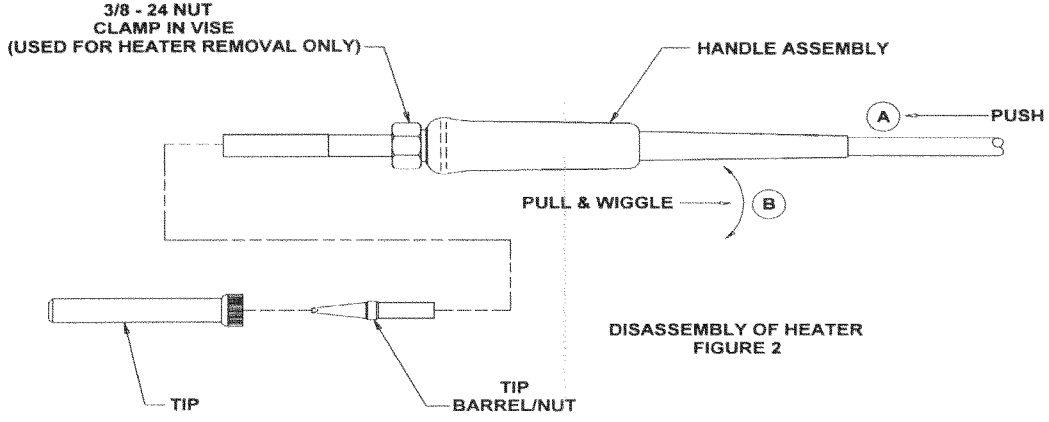
KEY NO.	PART NO.	DESCRIPTION
1	BA60	Barrel nut assembly
2	PES201	Heater/Sensor assembly
3	PES202	Cord/Handle assembly
Not shown	EC405	Sponge

OPTIONAL PARTS

PART NO.	DESCRIPTION
PH50	Tool stand assembly
SF60	Tool funnel for SMT tips
SMTA	Surface mount tip adapter
WPB1	Weller® Polishing bar



END VIEW, PLUG
FIGURE 1



DISASSEMBLY OF HEATER
FIGURE 2